IN THE CLAIMS:

1-24. (previously canceled)

25. (previously amended) A method for detaching apart the membrane and mineral fractions of empty broken egg shells comprising the steps of:

supplying empty broken egg shells, inclusive of a water content, inherently some of which is presumptively contained in the gas-exchange pores of the egg shells that extend through both the membrane and mineral layers thereof;

providing a main processor that operates at a level of vacuum with a configuration being elongated between an introduction end and a horizontally-spaced discharge end, which discharge end comprises a syphon port for syphoning out a pneumatic stream and a vertically-lower drain for outputting a non-suspended residual stream;

at a relatively elevated pressure, pre-heating the empty broken egg shells in order to elevate the bulk temperature to above what corresponds to the boiling temperature for water within the main processor's vacuum level;

introducing the pre-heated empty broken egg shells into the main processor's introduction end whereby a small percentage of the water content flashes into steam, this presumptively promoting the membrane fraction to eject or detach from attached or adhered shards or powder of the mineral fraction; and

providing the main processor with a throughput of a hot pneumatic carrier introduced at the introduction end and syphoned out the syphon port for syphoning up and suspending suspension particles from out of the detaching membrane and mineral fractions; as well as

providing the main processor with a mechanical conveyor for conveying non-suspending material from the introduction end to the discharge end for draining out the drain.

26. (previously amended) The method of claim 25 further comprising a vacuum source connected to the syphon port in the main processor to suction out a pneumatic stream comprising the pneumatic carrier, vapors, and suspension particles.

27. (original) The method of claim 26 further comprising a separation process between the vacuum source and the vacuum port of the main processor to separate the pneumatic stream into one set of components comprising substantially particle matter including substantially both liberated membrane petals and else shards or powder of the mineral fraction as well as into another set of components comprising variously the pneumatic carrier, vapors and perhaps ultra-fine particulate matter as dried albumen dust.

28. (previously amended) The method of claim 26 wherein the hot pneumatic carrier comprises a hot dry clean gas including hot air or, alternatively, hot flue/exhaust gases from a combustion process.

29. (previously amended) The method of claim 25 wherein the main processor comprises a multi-sectioned tubular vessel arranged generally horizontally between said introduction and discharge ends thereof as well as housing said mechanical conveyor, which comprises an internal auger that comparably extends end to end inside the vessel;

said vessel's sections including a tight-fitting duct section originating at the introduction end and which is characterized as surrounding the auger such that the auger's outer periphery virtually scrapes the vessel's wall in this tight-fitting duct section, and wherein said tight-fitting duct section changes into a flaring section that in turn changes into an over-sized duct section that terminates at the discharge end.

30. (previously amended) The method of claim 25 further includes supplying the main processor with heat comprising circulation of a non-introduced thermal fluid through sealed-out external or internal heat-exchange jackets or passages.

31-45. (previously canceled)

46. (previously added) Eggshell membrane product liberated from broken empty eggshells in accordance with the method of claim 25.

47. (previously added) A process line for inputting broken empty eggshells and outputting liberated eggshell membrane product in accordance with the method of claim 25.

48. (currently amended) ~~A method of recovering eggshell membrane from eggshells, comprising the steps of:~~

~~introducing empty broken eggshells from a higher pressure environment to a lower pressure environment while withdrawing from non-suspending materials of the empty broken eggshells suspension particles comprising liberated membrane petals and shreds by producing a pneumatic current through the lower pressure environment; and~~

~~conveying the non-suspending materials by a ribbon auger, wherein the lower pressure environment is configured in part as where the empty broken eggshells are introduced thereto as a tight-fitting duct around the ribbon auger whereby flow-through space is afforded only inside of the ribbon auger, as well as wherein further on the duct expands to provide an overhead space to provide alternate flow-through space through the overhead space, and wherein the ribbon auger conveys non-suspending residuals to a drain~~

A method for detaching apart the membrane and mineral fractions of empty broken egg shells comprising the steps of:

providing a main processor that operates at a level of vacuum with a pneumatic-carrier admission port, a spaced-away pneumatic-carrier syphon port, and a drain;

providing the main processor with a through-current of a hot pneumatic carrier admitted in through the admission port and syphoned out the syphon port;

supplying empty broken egg shells, inclusive of a water content, inherently some of which is presumptively contained in the gas-exchange pores of the egg shells that extend through both the membrane and mineral layers thereof;

at a relatively elevated pressure, pre-heating the empty broken egg shells in order to elevate the bulk temperature to above what corresponds to the boiling temperature for water within the main processor's vacuum level;

introducing the pre-heated empty broken egg shells into the main processor, and onto the through-current of the hot pneumatic carrier for mixing therewith, whereby a small percentage of the water content flashes into steam, this presumptively promoting the membrane fraction to eject or detach from attached or adhered shards or powder of the mineral fraction;

suspending in the current of the hot pneumatic carrier suspension particles from out of the detaching membrane and mineral fractions and carrying such out the syphon port; and

draining non-suspending residuals out the drain.

49. (canceled)

50. (currently amended) The method of claim 48 further comprising ~~suctioning the lower pressure environment~~ syphoning the main processor by a suction source, and interposing a separation process between the suction source and ~~lower pressure environment~~ main processor to separate the membrane petals and shreds from about all else.

51. (canceled)

52. (canceled)

53. (previously added) Eggshell membrane product acquired from broken empty eggshells in accordance with the method of claim 48.

54. (previously added) A process line for inputting broken empty eggshells and outputting liberated eggshell membrane product in accordance with the method of claim 48.

55. (currently amended) ~~A method of recovering eggshell membrane from eggshells, comprising the steps of:~~

~~preheating broken empty egg-shells;~~

~~introducing the pre-heated broken empty egg-shells to a vacuum through a pressure isolation device comprising an air-lock device including a vane or gear pump; and~~

~~withdrawing suspension particles comprising liberated membrane petals and shreds by producing a pneumatic current through the vacuum~~

A method for detaching apart the membrane and mineral fractions of empty broken egg shells comprising the steps of:

providing a main processor that operates at a level of vacuum with a pneumatic-carrier admission port, a spaced-away pneumatic-carrier syphon port, and a material-introduction passage comprising in series a pressure isolation device for introducing material into the main processor while maintaining the level of vacuum in the main processor and then a grinder for grinding the material outputted by the pressure isolation device within the vacuum level of the main processor;

providing the main processor with a through-current of a hot pneumatic carrier admitted in through the admission port and syphoned out the syphon port;

supplying empty broken egg shells, inclusive of a water content, inherently some of which is presumptively contained in the gas-exchange pores of the egg shells that extend through both the membrane and mineral layers thereof;

at a relatively elevated pressure, pre-heating the empty broken egg shells in order to elevate the bulk temperature to above what corresponds to the boiling temperature for water within the main processor's vacuum level;

introducing the pre-heated empty broken egg shells into the main processor through said material-introduction passage including said pressure isolation device and grinder for mixing with said through-current of the hot pneumatic carrier, whereby a small percentage of the water content flashes into steam, this presumptively promoting the membrane fraction to eject or detach from attached or adhered shards or powder of the mineral fraction; and

suspending in the current of the hot pneumatic carrier suspension particles from out of the detaching membrane and mineral fractions and carrying such out the syphon port and not non-suspending residuals.

56. (canceled)

57. (currently amended) The method of claim 55 further comprising suctioning the ~~vacuum~~ main processor by a suction source, and interposing a separation process between the suction source and ~~vacuum~~ main processor to separate the membrane petals and shreds from about all else.

58. (currently amended) The method of claim 55 wherein the ~~pneumatic current~~ hot pneumatic carrier comprises a hot dry clean gas including hot air or, alternatively, hot flue/exhaust gases from a combustion process.

59. (currently amended) The method of claim 55 further comprising withdrawing non-suspending residuals from the ~~vacuum~~ main processor by mechanical conveyance

thereof to a drain passage equipped with a pressure isolation device ~~comprising an air-lock device including a vane or gear pump~~ for withdrawing the non-suspending residuals out of the main processor while maintaining the level of vacuum in the main processor.

60. (previously added) Eggshell membrane product acquired from broken empty eggshells in accordance with the method of claim 55.

61. (previously added) A process line for inputting broken empty eggshells and outputting liberated eggshell membrane product in accordance with the method of claim 55.

62. (currently amended) ~~A method of recovering eggshell membrane from eggshells, comprising the steps of:~~

~~preheating broken empty egg-shells in a higher pressure environment, then introducing the pre-heated broken empty egg-shells to a lower pressure environment through a pressure isolation device comprising an air-lock device;~~

~~pneumatically syphoning away suspension particles, comprising liberated membrane petals or shreds, apart from non-suspending residuals; and~~

~~withdrawing non-suspending residuals from the lower pressure environment through a drain equipped with another pressure isolation device comprising another air-lock device~~

A method for detaching apart the membrane and mineral fractions of empty broken egg shells comprising the steps of:

providing a main processor that operates at a level of vacuum with a pneumatic-carrier admission port, a spaced-away pneumatic-carrier syphon port, and a material-introduction pressure isolation device for introducing material into the main processor while maintaining the level of vacuum in the main processor;

providing the main processor with a through-current of a pneumatic carrier admitted in through the admission port and syphoned out the syphon port;

supplying empty broken egg shells, inclusive of a water content, inherently some of which is presumptively contained in the gas-exchange pores of the egg shells that extend through both the membrane and mineral layers thereof;

at a relatively elevated pressure, pre-heating the empty broken egg shells in order to elevate the bulk temperature to above what corresponds to the boiling temperature for water within the main processor's vacuum level;

introducing the pre-heated empty broken egg shells into the main processor through said material-introduction pressure isolation device and into said through-current of the hot pneumatic carrier for mixing therewith, whereby a small percentage of the water content flashes into steam, this presumptively promoting the membrane fraction to eject or detach from attached or adhered shards or powder of the mineral fraction; and

suspending in the current of the hot pneumatic carrier suspension particles from out of the detaching membrane and mineral fractions and carrying such out the syphon port and not non-suspending residuals.

63. (currently amended) The method of claim 62 wherein ~~the step of pneumatically syphoning~~ the activity of syphoning the pneumatic carrier and suspension particles therewith out the syphon port is carried out by syphoning to a suction source, and further comprising the step of disposing a separation process before the suction source in order to separate the membrane petals and shreds from about all else.

64. (currently amended) The method of claim 62 wherein the ~~step of pneumatically syphoning induces the intake of a~~ pneumatic carrier ~~, which~~ comprises a dry clean gas including air or, alternatively, flue/exhaust gases from a combustion process.

65. (currently amended) The method of claim 62 further comprising applying mechanical conveyance ~~in the form of a ribbon auger to~~ within the main processor to convey the non-suspending residuals toward a drain therefor in the main processor.

66. (previously added) Eggshell membrane product acquired from broken empty eggshells in accordance with the method of claim 62.

67. (previously added) A process line for inputting broken empty eggshells and outputting liberated eggshell membrane product in accordance with the method of claim 62.